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Science in the News: Journalists' Constructions of Passive Smoking as a Social Problem

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Source: *Social Studies of Science*, Vol. 30, No. 5 (Oct., 2000), pp. 713-735

Published by: Sage Publications, Ltd.

Stable URL: <http://www.jstor.org/stable/285762>

Accessed: 28-06-2016 19:38 UTC

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**ABSTRACT** News media play critical rôles in public understandings of health issues. Media presentation of scientific evidence seems to involve the 'facts', which are then discussed and interpreted by various 'experts'. From an ethnomethodological or social constructionist perspective, however, news 'facts' themselves are socially constituted. Examining *how* health science is reported thus offers important insight into the social construction of health policy problems. We offer an interpretive account of United States newspaper coverage of passive smoking during a time in which several major scientific studies of the issue were conducted and reported upon. We argue that newspaper journalists, through the use of several rhetorical devices, constructed an account of the passive smoking issue in which scientific 'facts' were less important than moral 'facts'. Rather than (or sometimes, in addition to) explicating science, newspaper coverage conveyed a moral narrative highlighting tensions between American cultural values of individual liberty and protection of the public health.

**Keywords** media, policy, social problems, tobacco industry

## Science in the News:

### Journalists' Constructions of Passive Smoking as a Social Problem

*Ruth E. Malone, Elizabeth Boyd and Lisa A. Bero*

In discussions concerning the health of the public, 'science' has traditionally been treated as an impartial arbiter, providing the evidence upon which to weigh and evaluate the risks (or benefits) associated with certain behaviours, such as smoking, drinking, diet, exercise, or sexual behaviour. The news media play a critical rôle in both influencing and reflecting public opinion and understanding of health-related issues by providing one of the primary means through which scientific (and other) information is brought to the attention of the general public.<sup>1</sup>

From a commonsense perspective, the presentation of scientific evidence seems to involve a simple presentation of the 'facts', which are then discussed and interpreted by various 'experts'. The scientific 'facts', though requiring some interpretation to be understood by a diverse public, are often perceived as largely 'speaking for themselves'; it is the task of the audience or readers to evaluate the implications of those facts and come to conclusions regarding appropriate action (either personal or policy). From an ethnomethodological or social constructionist perspective, however, news stories, the presentation of scientific studies, the experts, and even

*Social Studies of Science* 30/5(October 2000) 713–35

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[0306-3127(200010)30:5;713-735;016846]

the 'facts' themselves are socially constituted through sets of routine practices.<sup>2</sup> Examining the practices through which health-relevant science is reported thus offers important insight into the social construction of health policy problems.

This paper offers an interpretive account of United States newspaper coverage of passive smoking (inhaling the smoke from others' cigarettes, also known as 'environmental tobacco smoke') over the period spanning 1981–92, a time during which several major scientific studies of the issue were conducted and reported upon in newspapers. We argue that newspaper journalists, through the use of several rhetorical devices, constructed a particular account of passive-smoking science that placed the responsibility for tobacco-related harms in the corporate power structure of the tobacco industry. This portrayal conveyed a strong moral narrative that captured tensions between the American cultural values of individual liberty, on the one hand, and protection of the health of the public on the other.

### **Historical Perspectives on the Tobacco Problem**

The social construction of tobacco use as a social and moral problem has a long history, well-chronicled by others.<sup>3</sup> For the most part, previous constructions of tobacco as a social problem have emphasized the rôle played by the tobacco user. In the portrayal of passive smoking, however, the terms of the problem were shifted – away from the tobacco user and toward the politics of the tobacco industry – all within a relatively short time period.<sup>4</sup>

In January 1981, the first scientific studies suggesting an association between passive smoking and lung cancer in nonsmoking adults appeared in the medical literature.<sup>5</sup> Over the next 13 years, additional studies appeared, providing confirming evidence that passive smoking caused cancer. Spearheaded by the efforts of US Surgeon General C. Everett Koop and grassroots 'nonsmokers' rights' groups, multiple policy changes were enacted across the USA, including over 400 local ordinances restricting smoking in enclosed public places, and Congressional bans on smoking on airline flights (see Table 1).

This widespread policy mobilization was unprecedented in the history of tobacco control. We sought in this study to understand one small but important aspect of this phenomenon: how news reports on passive-smoking science contributed to the construction of passive smoking as a policy issue during this active period of social and political change.

### **Covering 'Science' and the Construction of Health Policy Problems**

The lay press plays a significant rôle in disseminating scientific information to the general public, as well as to others in the scientific community.<sup>6</sup> Scientific studies are cited frequently in news articles about health and social policy. Although some researchers have suggested that the effect of

TABLE 1

## Key Events in Passive Smoke Policy

1981	First studies show association between passive smoking and lung cancer in adults
1982	Surgeon General Koop warns of passive smoke danger to nonsmokers
1986	Surgeon General's report on health consequences of passive smoking Americans for Nonsmoker's Rights founded National Research Council report on passive smoking
1988	Nearly 400 local ordinances across USA restrict smoking in public spaces US Congress passes law banning smoking on domestic air flights under six hours' duration
1989	Smoking banned on all US domestic flights
1990	US Environmental Protection Agency (EPA) begins risk assessment to determine whether passive smoke meets criteria to be classified as carcinogen
1991	US National Institute of Occupational Safety and Health calls passive smoke occupational carcinogen and recommends eliminating smoking in all workplaces (not passed into law)
1992	Draft EPA report classifies passive smoke as known human carcinogen
1993	EPA guidelines issued on protections from passive smoke EPA final report endorsed Smoking banned at White House
1994	Occupational Safety and Health proposes regulations on workplace smoking
1995	New York and California eliminate smoking in restaurants
1997	Tobacco industry settles flight attendant passive smoking lawsuit for \$350 million
1998	California bans smoking in bars

Sources: National Cancer Institute, *Smoking and Tobacco Control Monographs* (1993); Centers for Disease Control and Prevention; and *Tobacco Timeline*, [http://www.tobacco.org/History/Tobacco\\_History.html](http://www.tobacco.org/History/Tobacco_History.html)

lay media coverage on social policy is largely an indirect one,<sup>7</sup> with the media simply acting as 'channels for [policy] entrepreneurs',<sup>8</sup> these studies may tend to obscure the important rôle that the media play in presenting scientific findings to the public. Print media are a significant part of the process by which social problems generally, and policy problems in particular, are constructed as such in the public arena.<sup>9</sup>

To understand the constitutive work embodied in journalists' presentations of health and science stories, it is necessary to move beyond analyses of the 'correctness' or 'truth' of story content, and consider the choices made in describing, quoting and portraying scientists, scientific evidence and the interpretation of scientific studies and their implications. Although 'truth' or 'factual correctness' might seem to be the criterion used by *journalists* in reporting scientific findings, as Harvey Sacks pointed out about description in general,<sup>10</sup> in practice and in principle, this is not necessarily the case since any number of descriptors may be factually correct. For instance, in describing a scientist in her news story, a reporter is faced with a set of equally accurate descriptors – doctor, scientist, epidemiologist, university professor, New Yorker, and so on. As readers (and as analysts), we are faced with understanding the choice of the *particular* description(s) provided. If, as John Heritage has written, 'No description is strictly compelled by the state of affairs it describes. Any description is thus inherently selective in relation to the state of affairs it

depicts',<sup>11</sup> then news stories represent interpretive choices made by reporters in constructing a particular version of the world for their readers. Understanding *why* a reporter chose to represent an event in a particular way may be of interest to some; however, understanding *how* a story is presented yields equally important insight into that story's relevance for its readers, and its relationship (proposed or actual) to the larger social structure.

To better understand how journalistic portrayals of the science on passive smoking contributed to social constructions of the issue as one requiring policy action, we undertook an in-depth analysis of 96 news articles that mentioned one or more of the five most frequently cited scientific studies on passive smoking. Based on our understanding of the development of passive-smoking research, we anticipated that discussion of the science itself would become more central and compelling over time as the scientific evidence amassed, while tobacco industry critiques of mainstream science (as portrayed in the articles) would become increasingly strident and specific.

However, after conducting a chronological, systematic examination of passive-smoking articles (specifically sampled for their citation of scientific evidence) we found that, although the scientific evidence (or study) was always mentioned, it was eventually eclipsed by a focus on political or policy disputes. For example, although later articles in our sample continued to cite scientific studies, they increasingly focused on campaign contributions by tobacco companies, lobbying activities, and political pressure tactics. Overall, science played only a secondary and often relatively minor supporting rôle in the story. Science was not irrelevant, but the focus was rarely the scientific evidence. Instead, journalists focused on what we call the 'human' aspects of the science – the scientists themselves, the effects of their work on others, and the conflicts that arose over the interpretation of their work. We will discuss how this emphasis, across the sample of articles, conveyed a moral narrative of individual struggle against entrenched power interests, and how that narrative highlighted conflicts within the culture regarding the regulation of individual and corporate behaviour. In turn, our findings raise the question of whether reporting of science that is central to contested social and policy debates is different than reporting of scientific findings more generally.

## Methods

To obtain the sample of articles, we used on-line databases to search the five largest-circulation newspapers in the United States: the *New York Times* [abbreviated here as *NYT*], *Washington Post* [*WP*], *Wall Street Journal* [*WSJ*], *Los Angeles Times* [*LAT*], and *USA Today* [*USA*]. We searched for articles published between 1981 and 1994 that reported on research related to passive smoking, as described in previous work.<sup>12</sup> We found 180 articles.

Next, we selected from among the 180 articles all those mentioning one or more of the five scientific studies cited most often in the newspaper sample.<sup>13</sup> All of these scientific studies were either original research articles in peer-reviewed journals or government scientific panel reports, and all concluded that passive smoking was harmful. The article sample ( $n = 97$ ) included articles announcing the release of the new scientific study or report, articles detailing responses to or discussions of such reports, and news features in which human interest angles and the history of the issue were explored. Editorials and other opinion pieces were excluded because we wanted to focus on straight news coverage rather than the explicitly partisan discourse of op-ed pieces.

We assumed that the scientific studies cited most frequently were likely to have contributed most to media constructions of the issue. There was only scattered coverage of other studies: of 88 studies mentioned at least once in the larger sample, only ten were mentioned eight times or more, and the majority were mentioned only once or twice.<sup>14</sup> One article, an abbreviated duplicate of an earlier article in the same publication, was also excluded, giving us a final sample of 96 articles.

Four members of our research group independently read and coded the 96 articles in chronological order by year of publication. We began with a small set of preliminary coding categories, refining them and inductively developing others as analysis progressed. For example, we coded for key actors in the articles, such as smokers, tobacco industry officials, scientists, and so on, and for rhetorical devices, such as ‘stories’: personal anecdotes used illustratively within articles. We met after reading each chronological cluster of articles to compare interpretations and develop consensus on coding strategies. When coding disagreements arose, we compared the disputed text with other samples of the code, offered interpretive arguments, and discussed the issues until we arrived at consensus. We kept a record of our discussions, codes, and the emerging interpretive findings.

Coded segments were grouped into files and re-read for conceptual consistency and overlap. As patterns emerged, we revisited the original text. We looked for disconfirming evidence, contrast cases, and other examples of the pattern. We attended particularly to the use and positioning of direct quotations, recurrent metaphors, and descriptive text. We also counted the number of quotations attributed to the various actors.

## Findings

While the tobacco industry worked actively during the years covered by this study to challenge the scientific findings that passive smoking was harmful,<sup>15</sup> these efforts may have – perhaps unwittingly – contributed to a journalistic tendency to set up the story of passive smoking as a moral narrative, involving conflict between the tobacco industry [TI] and the non-TI-funded scientists doing research on the health effects of passive smoking. The science itself – the actual evidence upon which the various reports and studies cited were based – played a minor rôle in the narrative,

although it served as the vehicle for its conveyance. The overriding theme is that of the individual scientist struggling against powerful, well-funded and well-connected interests.

We identified four specific rhetorical devices through which this theme was conveyed: 1) science was portrayed as supporting commonsense understandings of the negative experience of secondhand smoke; 2) the scientific protagonists were personalized and portrayed as human and humane individuals; 3) scientific claims were juxtaposed with tobacco industry counterclaims in ways that gave implicit support to tobacco control positions; and 4) the tobacco control position was normalized. Through the use of these particular devices, the newspaper articles portrayed passive smoking as a morally charged issue involving the conflict of fundamental American social values. In the next section, we discuss the rôle of the scientific evidence, and examples of the four specific devices mentioned above.

### *The Scientific Evidence: Supported by Common Sense*

For a news article to be included in our sample, a scientific study had to be mentioned in it. However, the science of passive smoking was rarely discussed in any detail. Instead, passive smoking was presented as an issue of individual and policy concern. This was accomplished through appeals to experiential knowledge and commonsense understandings. The science itself was, if not irrelevant, at least secondary to the power of commonsense, socially based understandings of passive smoking as a physical experience. Science appeared as an important and welcomed support for policy action, but the causal ‘proof’ that ‘pure’ scientific evidence might provide was instead characterized as an elusive (and ultimately unnecessary) condition for public health action, as in the following examples of article text:

*Detailed scientific studies*, Banzhaf said are ‘*hardly necessary* to document the physical irritations which many nonsmokers suffer’ . . . [WP (5 February 1986), italics added]

And *no matter what the research shows*, a few simple truths remain: The vast majority of American adults – 76% – are not smokers. Many are annoyed by passive smoking. It might not make them seriously ill, but it makes their clothes smell and their eyes water. And they are no longer afraid to demand change. [LAT (26 May 1994), italics added]

These excerpts, and others like them that we identified, appeal to readers’ experiential knowledge rather than their scientific knowledge. Thus, although scientific studies suggested that passive smoking is harmful to one’s health, the impetus for policy or social action is the unpleasant physical experience of the smoke itself. Science serves to support common sense. These appeals to the mundane experience of smelly clothes and watery eyes also work to ground the actions of the protagonists (be it the non-TI-funded scientists, tobacco control advocates, or policy promoters) in

commonsense understandings of the world. This practice of appealing to commonsense understandings and, especially, experiential knowledge as a basis for action, is not an unusual one; indeed, it is a common feature of many social contexts, including medical and legal settings.<sup>16</sup> What is notable here is that journalists routinely chose to emphasize the phenomenological arguments over the 'expert' claims of the scientific evidence, and that these 'lesser' consequences of passive smoking (namely, smelly clothes, not lung cancer) were treated as adequate bases for social and policy action. In the end, the science of passive smoking was used to confirm what 'everyone' already knew through everyday experience,<sup>17</sup> and to establish socially legitimated 'facts' that provided official justification for subsequent action. Commonsense knowledge provided the grounds for policy change in the first place.

Though science provided 'official' legitimation for action based in commonsense perceptions of passive smoking, it was also treated in the articles as controversial and disputed terrain. Highlighting a strategy used repeatedly by the tobacco industry in fighting against government regulation of smoking in public places,<sup>18</sup> journalists typically quoted tobacco industry sources who challenged the design of scientific studies, their findings, and the interpretations of their significance, as well as the very motivations behind the findings and their presentation. Thus, the issue was characterized as a two-sided conflict over the rôle that science may play in the policy arena. For example, in the following excerpts, both mainstream scientists and TI-funded scientists posit science as involved in a conflict, but the motivations behind the resulting conflicts vary notably.

Penn, Pinkerton [scientists] and the others are always on guard about what they say, knowing that any statements might be used by one side or the other in the emotional debate over restricted smoking. The collision of politics and science troubles Pinkerton, for he is not a political man. His sole interest, he says, is science . . . 'I know it's a very emotional issue', he said, 'It's one of those things where we could relieve the consciences of a lot of [parents who smoke] or we could make them feel more guilty than ever'. [*LAT* (28 May 1994)]

'They've adjusted the science to fit the policy', said Borelli [tobacco-industry-funded scientist]. 'Clearly any issue dealing with tobacco is a very, very emotional issue. Sometimes emotion can override science. This [scientific report] is politically correct'. [*WP* (6 January 1993)]

Although conflict is not mentioned outright, in characterizing tobacco as an 'emotional' issue, these quotations invoke another set of commonsense understandings, namely that 'emotion' equates with disagreement or conflict. The conflict here is between the ideal of science as impartial and the uses to which it is put by partisan (or supposedly partisan) actors. Thus, the first scientist is portrayed as appreciating the moral responsibility and power involved in doing science and realizing that his (impartial) findings can be construed differently depending on one's ends; the second scientist accuses non-industry scientists, such as Pinkerton, of just such a manipulation – to suit their political ends. In both cases, impartial 'science' is



portrayed as playing a rôle in the politics of passive smoking. Focusing not on the scientific results *per se*, but rather on how they are or may be used by various social actors, pits two sides against one another. As we will describe, this practice is but one of several through which journalists consistently portrayed the TI-funded scientists as antagonistic, isolated, and morally suspect.

### *Personalization of the Scientific Protagonists*

The portrayal of an issue in terms of conflict is, of course, one very common journalistic convention, as Mark Fishman,<sup>19</sup> Todd Gitlin,<sup>20</sup> and others have described. However, in the portrayal of passive smoking, that conflict was consistently portrayed in a way that worked to undermine the moral credibility of the tobacco industry. For instance, in the above set of excerpts, the non-tobacco scientist is portrayed as aware of and sensitive to the moral implications of his work (and the effects it could have on 'innocent' persons); the tobacco-industry scientist, on the other hand, is presented as an antagonist, accusing the opposing side (the non-TI scientists) of manipulating their results to suit their political goals. The non-TI scientist is thus portrayed in a positive moral light, while the industry scientist is portrayed as finger-pointing so as to undermine the other side.

Aspects of this presentation were also apparent in more subtle structural terms. For instance, although the industry viewpoint was consistently represented (only 12 of the 96 articles failed to include some reference to the TI position), the non-TI-associated scientists were much more likely to be quoted directly and at length. Non-TI-associated scientists were quoted 98 times compared to just 12 times for TI-associated scientists, giving an impression of the non-TI-affiliated scientists as mainstream and representing a common position.

In addition to sheer quantity of quotations, there were also differences in the descriptions of the persons being quoted. For example, non-TI-affiliated scientists and other actors supporting smoking restrictions were typically described in warm, human, and even humane terms, as in the following examples.

He wanted his wife to quit smoking.

It was a simple wish, yet its consequences were profound. This was in the 1970s, in Greece, where smoking was as cherished a pastime as baseball in America. Dimitrios Trichopoulos didn't care about bucking the tide. He simply detested his wife's addiction.

A young cancer epidemiologist at the University of Athens, Trichopoulos tried the usual guilt trip. He told her she was hurting herself. On this, he said, the medical literature was clear. When that didn't work, he told her she was hurting him – an argument he could not support with statistics. She didn't believe it. Ever the scientist, he set out to prove it. [*LAT* (26 May 1994)]

In his small, cluttered office at Moffitt Hospital, Glantz grows furious when he talks about the judge's ruling [refusing to allow him to provide expert testimony for a nonsmoker, Garcia, who was suing her corporate

employer after she contracted lung cancer]. Leaning back in his chair, he shakes his curly mop of gray hair, says he does not understand how any doctor can be allowed to examine Garcia and render an 'expert opinion', while his words, based on a career of research, do not count. 'It's outrageous!' he thunders, 'A cheap procedural trick'. [*LAT* (27 May 1994)]

The use of personal background, family relationships, physical characteristics, and strong moral positions helps the reader sympathetically identify with these actors. They are portrayed as protagonists, both motivated by the wish to help others. The young scientist in the first example, who 'bucks the tide' and sets out single-handedly to prove the negative consequences of passive smoking, evokes images of a Horatio Alger figure, out to succeed against all odds. The second example gives the reader a rich physical description that makes the figure stand out as human and memorable. Both portraits involve the struggle of right versus wrong.

Contrast this with a quote from a TI-affiliated scientist, included in the same story as the scientist who 'bucked the tide':

'Policies should be based on science', Chris Coggins, the R.J. Reynolds toxicologist, said in an interview Wednesday. 'I think that the [EPA] science is very, very weak'. [*LAT* (26 May 1994)]

The quotation is presented as two short, terse, and emotionless sentences. No personal descriptive adjectives about the person are provided. The speaker is identified as '*the* R.J. Reynolds toxicologist', and since there has been no previous mention of this speaker in the article, or of any other toxicologists employed by R.J. Reynolds, the effect is to imply that Coggins is the *only* toxicologist so positioned. The TI-affiliated scientist is thus identified and isolated in terms of his employee status. Conversely, non-TI-affiliated scientists were more likely to be described as members of academic or research groups and to have their work supported through the comments of other scientists or policy advocates, again locating their position within a central or mainstream perspective.

The sole example of a TI spokesperson described in any personal detail was the following:

Phillip Morris' Borelli, father of two young children, admits he doesn't smoke in close confinement with his children because the smoke bothers them. 'They wave their hands at me. Sometimes my dog barks at me'. [*USA* (7 January 1993)]

This quote is interesting for the inconsistencies about Borelli (and his anti-regulation stance) that it raises. This spokesman for one of the largest tobacco companies, quoted elsewhere in the same article strongly denying that passive smoking is harmful, is here quoted in a way that suggests that he does not smoke around his own children, thus raising an inconsistency in his own previously-stated position. However, even within the quote, there is another inconsistency implied: apparently sometimes Borelli does smoke around his children because they 'wave' their hands at him, and

even his dog expresses his displeasure. So, despite his children's discomfort, he (sometimes) still smokes. Raising these inconsistencies both undermines his earlier position on the harmful effects of passive smoke and portrays him as a rather unsympathetic and uncaring figure.

Contrast this with a journalist's portrayal of Surgeon General C. Everett Koop and his father:

Dr Koop said that as a freshman in college he had come home and was told by his mother that his father was in ill health and that the son's help was needed in trying to get the father to drop his two-pack-a-day cigarette habit. 'I said he didn't have the guts to quit', Dr Koop said, adding that he was unaware that his father was just behind him. His father heard what he said, went to his room and threw out his cigarettes and smoking paraphernalia, he said. 'He never smoked again', the Surgeon General said. 'My approval was important to him'. [NYT (24 May 1984)]

This anecdote bears similarities in 'plot' to the Borelli story: a father is confronted with his child's disapproval of his smoking habit. But in this case, the father is portrayed as being sensitive and responsive to the child's position, taking immediate action to stop engaging in behaviours that the child finds offensive. The effect is to show the tobacco-control actors in a positive social and moral light, responsive to the needs and wishes of others; the TI-affiliated actor, on the other hand, is shown as inconsiderate of his children's wishes and, in fact, inconsistent in his own position.

The portrayal of non-TI-affiliated scientists in human terms, detailed with personal anecdotes, departs from the typically impersonal terms in which science is often reported or discussed among scientists themselves. The various 'distancing devices' often used by both interviewers and interviewees in broadcast news interviews,<sup>21</sup> and by scientists in the laboratory,<sup>22</sup> are less common in these accounts of the non-TI-affiliated scientists, raising the question of whether science concerning hotly debated social and health policy issues may be treated differently by reporters than, for example, new scientific discoveries about which the social policy implications are not yet so apparent.<sup>23</sup> As noted above, TI-affiliated scientists were routinely identified as such and treated as scientifically isolated and strongly linked to their industry sponsors.

For example, the following set of five short quotations constituted all of the direct quotations included in one *New York Times* article [29 May 1990]:

'The links between passive smoking and health problems are now as solid as any finding in epidemiology', said Dr Cedric F. Garland, an expert in the epidemiology of smoking at the University of California at San Diego.

Donald Shopland of the National Cancer Institute, who has helped prepare the Surgeon General's reports on smoking since 1964, said 'there's no question' now that passive smoking is also a cause of heart disease.

Dr Garland, the San Diego expert, said, 'We were out on a limb when we started but now we have the kind of replication one would want to see play a role in public policy'.

But Walker Merryman, a spokesman for the Tobacco Institute, a trade group, disputed the conclusions, citing reports from a conference last November at McGill University in Montreal that was partly sponsored by the tobacco industry. Dr Joseph M. Wu, a biochemist at New York Medical College in Valhalla, said in his concluding remarks at the meeting that the published data 'are inconsistent with the notion that environmental tobacco smoke is a health hazard'. He also said, 'It appears premature to take any sort of regulatory action with regard to environmental tobacco smoke at this point'.

'You don't get oxygen to the heart as well', Dr Glantz said [speaking of harm from passive smoking].

In these excerpts, the scientists quoted as making claims that passive smoking is harmful are identified as 'experts' associated with well-known academic or governmental institutions. The use of such institutional affiliations is one practice by which a person's credibility is established and s/he is authorized to speak on a given topic.<sup>24</sup> Furthermore, all the non-industry scientists are portrayed as presenting a single, unified position on the harms of passive smoking; in contrast, the single TI-linked scientist is cited only indirectly, through a tobacco industry spokesman, and as part of a tobacco-sponsored meeting. Thus, the lone voice against the regulation of passive smoking is, through the very structure of the article as well as its descriptive content, constructed as isolated in his opinion and inextricably linked to the tobacco industry.

Scientific isolation alone does not convey a moral message, although marginalization may be one way to portray someone as excluded from the moral community. However, when combined with other practices that undermined the credibility of the tobacco industry's position, the overall portrait was of the tobacco industry as antagonistic and morally suspect.

### *Positioning Arguments*

As seen above, the very structure of a reporter's story contributes to the overall construction of the social (and scientific) worlds it portrays. In addition to the sheer number of scientists quoted, the juxtapositioning of arguments made by tobacco and non-tobacco scientists added to the sense that the position held by the TI-supported scientists (and industry spokespersons) was untenable. For instance, the following paragraph comes from a story discussing the Repace-Lowrey study asserting that an estimated 500 to 5000 nonsmokers died each year of lung cancer caused by passive smoke.

William D. Toohey, Jr, a spokesman for the [tobacco] institute, said his organization was studying the report. 'The initial glance at it indicates it has a major problem in that it relies on data that have been seriously questioned', Mr Toohey said. 'It is totally unsupportable', the industry spokesman said. [NYT (3 November 1984)]

This quote, typical of TI quotes used throughout the articles, hangs unsupported by concrete references to actual study weaknesses. Additionally, the industry speaker is identified only as a 'spokesman' rather than as a scientist, who might be considered qualified to evaluate the quality of the study. It was also common to find the TI position presented by persons identified by the journalists as lawyers and lobbyists. Thus, the lines of the debate are drawn as being between scientists, on the one hand, and lawyers, lobbyists, and industry spokesmen, on the other.

Furthermore, a pattern of claims and counterclaims consistently portrayed the players in direct conflict with one another. The presentation of issues in terms of conflict or struggle is not unique to the story of passive smoke;<sup>25</sup> reporters typically construct a story as oppositional in nature through the juxtapositioning of claims and counterclaims. For example, the following quote was presented immediately after the above-mentioned reference to the Repace-Lowrey study:

In their report, Mr Repace and Mr Lowrey seem to suggest that the conclusive proof to which Mr Toohey referred is not necessary before action is taken. 'Because society is risk-averse, public health agencies assess and control carcinogenic risks despite incomplete evidence', they wrote. [NYT (3 November 1984)]

Here the direct quote of Mr Toohey is rebutted by the *reporter's* selection of a segment from the very study to which Mr Toohey objected; the effect is to encourage the reader to hear Repace and Lowrey *directly* rebutting Toohey's criticisms of their study. Through the strategic use and placement of quotes, the reporter constructs a dialogue between several parties, even though they were not originally in conversation.<sup>26</sup>

This pattern of assertion and challenge or rebuttal was common in the sample of stories and is, of course, consistent with the previously-noted tendency for journalists to cast issues in terms of dualistic oppositional conflicts. Another indicator of this was the choice of lexical items used to characterize the situation, including frequent use of war metaphors: the words 'battle', 'war', 'ammunition', 'struggle', 'attack', and 'fight' were used 95 times in the 98 stories, not counting references to 'heart attack' or 'asthma attack'.

By structuring articles in terms of dualistic, even militaristic conflict, readers were encouraged to view the substantive content of the article in terms of a struggle in which there were clearly defined, polarized sides, and between which they might be asked to take sides.<sup>27</sup> But, of course, the portrayal of the controversy or conflict is not neutral: intentionally or not, the structure of the argument is tilted in a particular direction. In this case, the conflict was tilted most often in the direction of the tobacco control position, as in the following excerpt from a story discussing a scientific estimate of mortality from passive-smoking-related causes. In this case, the journalist uses a common rhetorical device – an assertion/challenge/response format that consistently gives the tobacco-control position last word on the issue.

*Assertion:*

Wells said he himself was surprised by his estimate [of passive-smoking-related mortality]. 'When I first calculated these numbers, they scared the hell out of me. I'd be the first to admit they're wrong, if we can find out why they're wrong'. So far, no one has, although not everyone accepts Wells' estimate.

*Challenge:*

Weeks, the industry consultant, dismissed Wells' study, as he does concern about passive smoking altogether. He believes passive smoking causes no risk, but he doesn't think any of the data on the subject are very good. Many researchers would agree that current estimates are imprecise.

*Response:*

But Repace answers Weeks this way: 'Environmental tobacco smoke is tobacco smoke. And tobacco smoke is known to cause 400,000 deaths a year. Here is a known carcinogen . . . Are we to assume that low levels are innocuous? The question is, what standard of proof you require before you take public action?'. [*LAT* (9 July 1989)]

Structuring an argument in this way is reminiscent of a debate; as David Greatbatch argues, it also parallels the structure of broadcast news interviews in which opposing viewpoints are solicited from various 'experts' or commentators.<sup>28</sup> The advantage is to the speaker who has the last word, since s/he can make specific responses to the objections previously raised by the opponent, and can add additional supporting information to bolster his/her position. In presenting the passive-smoking issue, the pro-regulatory position was consistently favoured over the pro-tobacco position: in only 22 of the 96 articles did the tobacco spokesperson get the last word.

In addition to structuring the debate (or here, a debate-like discussion), as Greatbatch points out in the context of the broadcast news interview, the use of such a device also allows for a more confrontational presentation of an issue without forcing the reporter to engage in openly hostile lines of questioning. In the case of written news reports, the device allows the reporter to build a narrative of conflict out of the words of the sources, instead of assuming an overtly critical stance toward one side or the other. Although the reporter's critical slant is apparent, through this structural device of assertion/challenge/response, the reporter can maintain a neutralistic position while at the same time emphasizing the conflictual nature of the issue. Thus, this device mirrors practices found in interactional contexts and (re)produces for the reader the sense that a lively debate exists.

In addition to giving the non-tobacco scientists the 'last word' in (re)created arguments, reporters also selected quotes that consistently portrayed the non-TI-scientists as less extreme, more uncertain, and therefore, morally creditable and credible. For example, in the previous excerpt, Wells, the non-TI-associated scientist, is quoted as being 'surprised' by his findings, and ready to admit error should error be identified, an attitude associated strongly with the ideal of science as a value-free enterprise. This type of uncertainty statement, which can in itself be a strategic element in effective argument, and which does not necessarily

undermine the credibility of knowledge claims,<sup>29</sup> has the effect of increasing the credibility of future interpretations by those who use it, since it stakes out a position of scientific 'objectivity' tempered by moral concerns. These uncertainty statements were most common early in the sample of articles, when fewer scientific studies had been completed.

The portrayal of non-TI-associated scientists as willing to admit uncertainty (should compelling counterevidence be found) casts them not only as objective but, specifically, as less extreme, willing to listen to 'reason', and not motivated by political concerns. As in the early example of the scientist Penn, who appreciated the moral responsibility he had in disseminating the results of his study, the inclusion of these uncertainty statements helps portray the unmotivated character of the tobacco-control scientific findings. In contrast, TI-affiliated scientists and spokespersons were frequently quoted making unequivocal statements, such as the following:

The tobacco industry's position is that passive [*sic*] smoking poses 'no proven harm or risk whatsoever', said Scott Stapf, spokesman for the Tobacco Institute, the industry's trade group. [*WP* (5 February 1986)]

This statement by the TI spokesman is an extreme one, staking out a hardline position that disallows the possibility that alternative understandings or counterevidence could sway the industry's stance. In this extreme formulation of their position,<sup>30</sup> the industry spokesman also assumes an adversarial stance by asserting his case in the strongest terms possible (namely, 'no proven harm or risk whatsoever'). Taken together, the industry spokesperson and the non-tobacco scientist are treated as polar opposites – both in terms of their stances toward the science itself, and in the degree of openness and reasonableness they represent. In its extreme position, the TI's credibility is thus undermined or at least made suspect by virtue of its position 'next to' the reasonable, sensitive non-tobacco scientist.

Science itself seemed further muted in later articles, where the sustained focus was on the political aspects of the emerging policy disputes. In the following example, the TI challenge is refuted, not by quoting a tobacco-control or pro-regulatory source, but by noting the context within which the assertions are being made. The effect is to undermine the credibility of the TI position and to suggest, again, the industry's isolation in holding on to claims that are increasingly untenable in the face of mounting evidence.

The Tobacco Institute sees the EPA report as 'scientifically unsupported'. Nonetheless, dozens of new studies show significant harmful effects, particularly on children. [*USA* (22 June 1989)]

Throughout the sample, reporters consistently treated the TI position as predictable and reactionary. For example, in another article with strong quotes from a TI spokesperson, the journalist shares a rhetorical rolling of the eyes with the reader in the first word of the paragraph:

*Naturally*, the Tobacco Institute is discounting news reports. [WSJ (14 October 1986), italics added]

The effect here is to make clear that the tobacco industry *should be expected* to oppose or challenge *any* scientific reports suggesting harm from passive smoking; this is *natural*, even boringly predictable. The tobacco industry's credibility in interpreting science is thus undermined by the 'naturalness' of the industry's obvious self-interest.

Finally, in addition to direct or indirect counterstatements, journalists also conveyed an image of tobacco companies as engaged in political intrigue and morally corrupt practices. For example, a *Wall Street Journal* article noted that

The tobacco lobby continues its considerable efforts to sway lawmakers. Last year, for example, the Tobacco Institute, the industry's trade group, handed out \$91,000 in honoraria to members of Congress, much of it in \$1,000 or \$2,000 fees for making presentations to institute members at their Tuesday morning breakfasts. [WSJ (7 August 1987)]

The tobacco industry portrayed here is essentially immoral, the implication being that their representatives resort to smalltime bribes to get Congressional support for their anti-regulation position.

### *Normalizing Discourse*

Characterizations used by journalists in providing background or setting the reader up for the story that follows provide access into 'commonsense' constructions of social problems. We refer to this as 'normalizing' discourse (drawing broadly on Foucault's notion of normalizing discipline):<sup>31</sup> language that conveys what is commonly understood to be the case, that conveys norms. Normalizing discourse tells what 'everybody' thinks or does, or offers predictions based on such understandings.

In our sample, the normalizing discourse of journalists suggested that regulatory action on passive smoking was, if not inevitable, very likely to occur. The following excerpts are representative of this practice (italics added):

*Almost certainly the reports will further fuel already widespread moves by government agencies and private employers to ban or restrict smoking in public places and the workplace . . . With the exception of tobacco industry supporters, there is fairly widespread agreement that it can trouble people with serious cases of asthma, allergies, chronic bronchitis, and possibly aggravate the condition of people with existing heart or lung ailments.* [WSJ (14 October 1986)]

Although the report breaks no new scientific ground, its conclusion that studies of spouses persuasively link passive smoking with lung cancer is *likely to give renewed impetus* to efforts to limit smoking in public places. [WP (15 November 1986)]

*Many people, including those without health conditions, are becoming increasingly intolerant of smoking on planes.* [WSJ (7 August 1987)]



*Such federal interest is likely to increase public pressure for wider bans on workplace smoking.* [WSJ (25 June 1990)]

The tobacco industry and its supporters protested today's tobacco control pronouncements, *the latest in a drumbeat echoing across the country* . . . [NYT (26 March 1994)]

Characterizations such as these carry the interpretive commentary embedded in the journalistic telling of any story, no matter how 'objectively' presented. They encourage the reader of the story toward a particular understanding of the 'facts' of the story, and make predictions regarding the direction that the issues may take in the future. To the degree that such normalizing discourse characterizes what 'many people' think, feel, or believe, it also transmits commonly held social values and provides suggestions for how conflicts among values might be resolved.

For example, the tensions between the strongly held American values of individual rights and protecting the health and safety of the public figured prominently in the passive smoking articles:

**Innocent Shouldn't Pay** [headline]

Many people believe smokers have the right to smoke. But they also believe that others shouldn't have to pay a price. [LAT (9 July 1989)]

'We don't know what the risk is, if there's an actual health risk', added Byar, one of the report's co-authors. 'But it just doesn't seem right that you have to excrete somebody else's poison'. [LAT (9 February 1989)]

But what about that 'somebody else'? Aren't smokers the real antagonists? Our examination of the portrayal of smokers suggests that because smokers themselves were understood as 'addicts', they were treated as too weakened to function in the narrative as moral agents or worthy adversaries.

### *Smokers*

The portrayal of smokers changed over the time covered by our sample of articles. In those from the early 1980s, a certain delicacy characterized references to smokers. Smokers themselves rarely appeared, except as oblique references, as in 'the smoke of others'. In fact, they were almost entirely absent in the news articles except as discussed in the third person; *smoke* was the focus, not the smoker. Former Surgeon General C. Everett Koop was one exception, quoted as urging smoking parents to stop for the sake of their children's health.

By the late 1980s, smokers began to appear – still rarely – as subtly dangerous, hard to control, and in need of special handling due to their addiction. For example, a cited quote from the 1986 National Academy of Sciences report, which urged a ban on smoking on airline flights, noted that, in the journalist's words, most of the committee members 'began with the assumption that addicted smokers could not be deprived of their habit over long flights' [WP (20 August 1986)]. Such a description raises the

issue of what might happen if smokers were deprived, intimating that the individual or social consequences might be so dreadful as to make such a policy option unthinkable. In June 1987, a *Wall Street Journal* article discussing the American Medical Association's call for a federal ban on smoking on airplanes noted that a ban

is especially possible now because nicotine chewing gum is available. Such gum is a tobacco substitute and can relieve the discomfort suffered by severely addicted smokers when they're deprived of cigarettes for extended periods. [*WSJ* (25 June 1987)]

Smokers thus began to appear as vaguely threatening because of their uncontrollable addiction, but they still did not appear 'in person' in the form of direct quotations. Rather, they were consistently referred to in the third person, reinforcing their 'otherness'. Smokers thus became the ones talked about, the ones discussed because of their problem. They were almost never speakers themselves.

By the 1990s, the smoker as deviant was even more pronounced. The smoker, not always the cigarette, was occasionally identified as the source of toxins in the air and as a threat to the environment. For example, in a story in May 1990, the writer noted that there is harm to the health of 'other people nearby who inhale the toxic fumes *generated by the smoker . . .*' [*NYT* (29 May 1990), italics added]. Again, two years later:

The American Heart Association said it 'strongly supports efforts to eliminate all exposure of nonsmokers to tobacco smoke *puffed into the environment by smokers*'. [*WSJ* (11 June 1992), italics added]

The first direct quote from a smoker did not appear in our sample until 1993. Responding to the EPA report, which classified passive smoke as a carcinogen, a smoker was quoted in *USA Today* as having said that the report 'sort of upsets me. I try to be a courteous smoker, not to smoke in places you're not supposed to' [*USA* (7 January 1993)]. This quote, with its mild-mannered remonstrance, offers an image of a smoker who is not dangerous because he is compliant with social controls. This quote thus serves to reinforce the idea that social controls are both needed and effective.

In September 1993, the *Washington Post* reported on the first national march in Washington to fight 'tobacco related discrimination'. This was one of the very few stories to include direct quotes from smokers, but the lead to the story, and its amused, ironic tone throughout, suggest the continued marginalization of the smoker:

'Right on! Right on!' bellowed an excited vendor, as 45 adults, five children and three dogs marched past him yesterday behind a banner that announced their cause: 'Stop Discrimination Against Smokers'. [*WP* (26 September 1993)]

Later in the story, the marchers were described as having 'cheered and hollered' when a man lit a cigarette; and having 'plopped down' on the

grass to listen to speeches. The lexical choices here, including colloquial verb forms – ‘bellowed’, ‘hollered’, ‘plopped’, ‘tooted’ – suggest an unsophisticated and trivial political and social discourse. The smoker is thus further marginalized.

In the 1994 articles, the smoker appeared weak, besieged, banished from the common social world, in contrast to the vaguely menacing portrayal of the late 1980s. Addiction, in these articles, implies weakness, helplessness and powerlessness. In a *New York Times* article from March 1994, for example, Representative Henry Waxman, who argued in Congress for tobacco control measures, suggested that nicotine be banned altogether. The journalist paraphrased him as saying that eliminating nicotine

would allow those who wanted to quit to do so and would provide more of a choice to those who wanted to continue to smoke, rather than forcing them to continue by virtue of their addiction. [NYT (26 March 1994)]

The portrayal of smokers as helpless addicts also undercuts the moral argument (put forth by the tobacco companies) for smokers’ individual right to smoke. Rather than being portrayed as active, free agents exercising rights, smokers were instead portrayed as trapped and made helpless by their addiction. This portrayal thus undercuts the position of the tobacco industry, and indeed portrays the industry as preying on the weak and addicted.

Smokers also appeared as physically isolated and excluded in the 1994 news stories. A series of articles in the *Los Angeles Times* included the following characterizations:

Across the United States, in cities large and small, a familiar sight has emerged: Smokers congregating outside. [LAT (26 May 1994)]

The [airport smoking area] rooms are not a big hit with smokers. ‘This’, said one, ‘is exactly like people felt when they were forced to sit in the back of the bus’. [LAT (27 May 1994)]

The *Washington Post* described smokers as people who

Sought their furtive pleasure by the back door in the chill rain. For many smokers, the cachet and the fun had faded away, leaving the practice about as glamorous as nose picking. [WP (29 May 1994)]

Gerald Markle and Ronald Troyer,<sup>32</sup> drawing on the work of Joseph Gusfield,<sup>33</sup> contrast the assimilative model of deviance definition with the coercive model. In the assimilative model, the smoker admits deviance and is thus viewed with pity, while under a coercive model, the smoker resists and must therefore be battled as an enemy. In these news stories, elements of both models are present, but at no time does the smoker function as a significant actor or moral agent. Smokers’ voices as individual persons are almost never heard; rather, they are portrayed as a kind of Greek chorus

that provides essential background. They are treated as largely peripheral to the larger issue: the conflict between the tobacco industry and those who would challenge it. Embroiled in their own struggles with addiction, they are portrayed as more and more 'other', and also as less of a threat. Their marginal status also makes them unworthy participants in the moral struggle: that rôle is given to the powerful tobacco industry. It is this portrayal that both highlights and perhaps resolves tensions between individual rights and protection of the innocent public, since the responsibility for tobacco addiction (and its social health consequences) is shifted to corporate entities rather than individual smokers. It thus allows for both the assimilation of individual smokers and, at the same time, calls for coercive (policy) action directed at industry.

## Discussion

In earlier work,<sup>34</sup> we found that the tobacco industry attempted to set up 'controversy' over scientific issues where none existed, a strategy that could be regarded as an obstacle to tobacco control efforts. Ironically, however, it may have been just this strategy of shaping the developing issue of passive smoke as a 'controversy' that kept the issue in the press and contributed to coverage that drew attention to the moral position of the industry.

In their portrayal of passive-smoking science, the news media consistently presented a narrative that pitted the tobacco industry against the scientists investigating the health effects of passive smoke. In presenting this narrative of struggle and conflict, the terms of the struggle involved moral dimensions of right *versus* wrong, and individual liberties *versus* the protection of the public's health. Deborah Stone has emphasized that causal stories, which are used to transform bad conditions or difficulties into political problems, have both empirical and moral dimensions. According to Stone, political actors, such as the news media,

do not simply accept causal models that are given from science or popular culture or any other source. They compose stories that describe harms and difficulties, attribute them to the actions of other individuals or organizations, and thereby claim the right to invoke government to stop the harm . . . Political actors use narrative story lines and symbolic devices to manipulate the so-called issue characteristics, all the while making it seem as though they are simply describing facts.<sup>35</sup>

In developing her typology of causal arguments, Stone suggests that such arguments are more likely to be successful (that is, to become the dominant belief or construction of an issue) if they accord with deeply held cultural values. In the case of passive smoking news coverage, the broad narrative that 'innocent people are being harmed due to the influence of the powerful tobacco companies' both captures and may help resolve tensions between the fiercely-held American value of individual freedom

and the often conflicting values of shared, common goods, such as public health measures.

It is important to recall that, during the time period in which these articles were written, a vigorous pro-regulatory agenda was being put forward by several advocacy organizations, most notably Americans for Nonsmokers Rights, which quite deliberately emphasized 'the smoke, not the smoker' in their campaigns. This emphasis, which, as we show here, appears to have been replicated in the mainstream news accounts of passive-smoking science, may have helped shift the issue of passive smoking from the problem area Stone identifies as 'unguided actions and unintended consequences', or accidental causes, to the area of 'purposeful harm and intended consequences', or intentional causes.<sup>36</sup> It is when problems move into this area, Stone argues, that policy action is most likely to occur. In this case, the policy action was warranted once the story was constructed with the tobacco industry as the morally accountable party. If the press had not thus drawn attention to the industry's moral position, it is very possible that tobacco control policy would not have advanced so rapidly.

It is also important to observe that this particular focus by the media is also, at least in part, a reflection of the social organization of the news itself. As Mark Fishman and others have observed,<sup>37</sup> journalists tend to rely on government and other official representatives as their sources (quoted and not). If, as our analysis shows, the issue of passive smoking was overwhelmingly portrayed as a conflict between scientists and the tobacco industry, and not, for instance, between smokers and nonsmokers, then this may reflect both the news 'peg' upon which many stories hung (that is: new government studies released; new regulatory hearings), as well as the sources commonly associated with those 'pegs' (scientists who contributed to the government reports; tobacco industry lobbyists commenting during the hearing process). Journalists, constrained by the practices of news gathering and reporting, thus construct a narrative line that is consistent with the social organization of their particular world. The precise character of the narrative is conveyed through specific rhetorical devices that construct the issue in explicitly moral terms.

In our sample of news articles, science is treated by all – including the reporters themselves – as an appropriate arbiter in disputes over health risks and related social policy. Yet the passive smoking issue was constructed as an explicitly moral one, suggesting that for a scientific issue to reach the 'social problem' stage in the news media, the science may require interpretation in moral (or human) terms. Science is an important enabling condition – but perhaps, as we have shown, not always a necessary one – for policy action to be warranted. Scientists identify and legitimate the 'facts' used in causal claims, but it remains for those facts to be socially constructed as such. This study offers additional support for the assertion that the rôle of media advocacy in public health may be as critical for policy action as the science which undergirds proposed public health measures.<sup>38</sup>

## Notes

The authors acknowledge the assistance of Anastasia Misakian, Gail Kennedy, Philip Lollar, and Annie Larson. Work on this study was supported by a grant from the Robert Wood Johnson Foundation (Award 024783) and by fellowship funding from: (REM) the US Agency for HealthCare Research and Quality (formerly the Agency for Health Care Policy and Research), and the Pew Health Policy Fellowship Program; and (EAB) the Industry-University Cooperative Research Program (P98-09), Office of the President, University of California.

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